Qubino

The **INNOVATIVE** and **SMALLEST**

Flush dimmer

Ordering code: **ZMNHDA2** Type: **Flush dimmer**

This Z-Wave module is used for dimming the light or to manage the speed of a fan. The module can be controlled either through a Z-Wave network or through the wall switch.

The module is designed to be mounted inside a “flush mounting box” and is hidden behind a traditional wall switch.

Module measures power consumption of light or fan and supports connection of digital temperature sensor.

Supported switches

Module supports **mono-stable** switches (push button - I1).

Installation

- Before the installation disconnect power supply.
- Connect the module according to electrical diagram.
- Locate the antenna far from metal elements (as far as possible).
- Do not shorten the antenna.

Danger of electrocution!

- Module installation requires a great degree of skill and may be performed only by a qualified and licensed electrician.
- Even when the module is turned off, voltage may be present on its terminals. Any works on configuration changes related to connection mode or load must be always performed by disconnected power supply (disable the fuse).

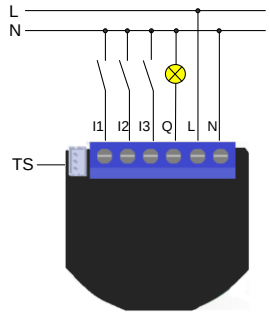
Note

Do not connect the module to loads exceeding recommended values. Connect the module only in accordance to the below diagrams. Improper connections may be dangerous.

Package contains:

- Flush dimmer

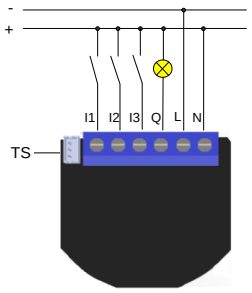
Electrical diagram 230VAC



Notes for the diagram:

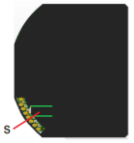
N	Neutral lead
L	Live lead
Q	Output for electrical device
I3	Input for switch/push button or sensor
I2	Input for switch/push button or sensor
I1	Input for push button
TS	Terminal for digital temperature sensor (only for Flush dimmer module compatible digital temperature sensor, which must be ordered separately).

Electrical diagram 24VDC



Notes for the diagram:

N	+ 24VDC
L	- 24VDC
Q	Output for electrical device
I3	Input for switch/push button or sensor
I2	Input for switch/push button or sensor
I1	Input for push button
TS	Terminal for digital temperature sensor (only for Flush dimmer module compatible digital temperature sensor, which must be ordered separately).



S Service button (used to add or remove module from the Z-Wave network).

Module Inclusion (Adding to Z-Wave network)

- Connect module to power supply,
- bring module within maximum 1 meter (3 feet) of the main controller,
- enable add/remove mode on main controller,
- auto-inclusion (30 minutes after connected to power supply) or
- press service button **S** for more than 2 seconds or
- press push button **I1** three times within 3s (3 times change switch state within 3 seconds).

Module Exclusion/Reset (Removing from Z-Wave network)

- Connect module to power supply,
- bring module within maximum 1 meter (3 feet) of the main controller,
- enable add/remove mode on main controller,
- press service button **S** for more than 6 seconds or press push button **I1** five times within 3s (5 times change switch state within 3 seconds)

By this function all parameters of the module are set to default values and own ID is deleted.

If service button S is pressed more than 2 and less than 6 second module is excluded, but configuration parameters are not set to default values.

Association

Association enables Flush dimmer module to transfer commands inside Z-Wave network directly (without main controller) to other Z-Wave modules.

Associated Groups:

Group 1: multilevel (triggered at changes of state/value of the Flush dimmer)

Group 2: basic on/off (triggered at change of the input I2 state and reflecting its state)

Group 3: basic on/off (triggered at change of the input I3 state and reflecting its state)

Group 4: default reporting group (reserved for the main controller)

Configuration parameters

Parameter no. 2 – Input 2 contact type

Available configuration parameters (data type is 1 Byte DEC):

- default value 0
- 0 NO (normaly open) input type
- 1 NC (normaly close) input type

Parameter no. 3 – Input 3 contact type

Available configuration parameters (data type is 1 Byte DEC):

- default value 0
- 0 NO (normaly open) input type
- 1 NC (normaly close) input type

Parameter no. 10 - Activate / deactivate functions ALL ON / ALL OFF

Available configuration parameters (data type is 1 Byte DEC):

- default value 255
- 255 - ALL ON active, ALL OFF active.
- 0 - ALL ON is not active, ALL OFF is not active
- 1 - ALL ON is not active, ALL OFF active
- 2 - ALL ON active, ALL OFF is not active

Dimmer module responds to commands ALL ON / ALL OFF that may be sent by the main controller or by other controller belonging to the system.

Parameter no. 30 - Saving the state of the device after a power failure

Available configuration parameters (data type is 1 Byte DEC):

- default value 0
- 0 - Dimmer module saves its state before power failure (it returns to the last position saved before a power failure)
- 1 - Dimmer module does not save the state after a power failure, it returns to "off" position

Parameter no. 40 – Power reporting in Watts on power change

Set value means percentage, set value from 0 - 100=0% - 100%

Available configuration parameters (data type is 1 Byte DEC):

- default value 5
- 0 – Reporting Disabled
- 1 – 100 = 1% - 100% Reporting enabled. Power report is send (push) only when actual power in Watts in real time change for more than set percentage comparing to previous actual power in Watts, step is 1%.

NOTE: if power changed is less than 1W, the report is not send (pushed), independent of percentage set.

Parameter no. 42 – Power reporting in Watts by time interval

Set value means time interval (0 – 65535) in seconds, when power report is send.

Available configuration parameters (data type is 2 Byte DEC):

- default value 300 (power report in Watts is send each 300s)
- 0 – Reporting Disabled
- 1 – 65535 = 1 second – 65535 seconds. Reporting enabled. Power report is send with time interval set by entered value.

Parameter no. 60 – Minimum dimming value

Available configuration parameters (data type is 1 Byte DEC):

- Default value 1 (Minimum dimming value is 1%)
- 1- 98 = 1% – 98%, step is 1%. Minimum dimming values is set by entered value.

NOTE : The maximum level may not be lower than the minimum level! 1% min. dimming value is defined by Z-Wave multilevel device class.

Parameter no. 61 – Maximum dimming value

Available configuration parameters (data type is 1 Byte DEC):

- Default value 99 (Maximum dimming value is 99 %)
- 2- 99 = 2% – 99%, step is 1%. Maximum dimming values is set by entered value.

NOTE : The maximum level may not be lower than the minimum level! 99% max. dimming value is defined by Z-Wave multilevel device class.

Parameter no. 65 – Dimming time (soft on/off)

Set value means time of moving the Dimmer between min. and max. dimming values by short press of push button I1 or controlled through UI.

Available configuration parameters (data type is 1 Byte DEC):

- Default value 100 (Dimming time between min. and max. dimming values is 1s)
- 1- 255 = 10mseconds – 2550mseconds (2,55s), step is 10mseconds

Parameter no. 66 – Dimming time when key pressed

Time of moving the Dimmer between min. and max dimming values by continues hold of push button I1.

Available configuration parameters (data type is 1 Byte DEC):

- Default value 3 (Dimming time between min. and max. dimming values is 3s)
- 1- 255 = 1 second – 255 seconds

Technical Specifications

Power supply	110 - 230 VAC ±10% 50/60Hz, 24-30VDC
Rated load current of AC output	0,85A / 230VAC
Rated load current of DC output	0,85A / 30VDC
Output circuit power of AC output (resistive load)*	200W (230VAC)
Output circuit power of DC output (resistive load)	21W (24VDC)
Power measurement accuracy	+/-2W
Frequency Range	868.42MHz, Z-Wave
Digital temperature sensor range (sensor must be ordered separately)	-50 ~ 125°C
Operation temperature	-10 ~ 40°C
Distance	up to 30 m indoors (depending on building materials)
Dimensions (W x H x D)	41,8 x 36,8 x 15,4mm
Weight	25g
Electricity consumption	0,7W
For installation in boxes	Ø ≥ 60mm or 2M
Switching	MOSFET

***max 100W mono-phase asynchronous fan motor can be connected to dimmer output**

Light types which support dimming function:

- The classical incandescent light.
- Halogen lamps operated by 230 V AC (High Voltage Halogen).
- Low voltage halogen lamps with electronic or conventional transformer.
- Dimmable fluorescent Light.
- Dimmable compact fluorescent light (CFL).
- Dimmable LED lights.

Important disclaimer

Z-Wave wireless communication is inherently not always 100% reliable, and as such, this product should not be used in situations in which life and/or valuables are solely dependent on its function.

Warning

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.
Contact your local government for information regarding the collection systems available. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being. When replacing old appliances with new once, the retailer is legally obligated to take back your old appliance for disposal at least for free of charge.

This user manual is subject to change and improvement without notice.

Qubino
Goap d.o.o. Nova Gorica
Ulica Klementa Juga 007
5250 Solkan
Slovenia

E-mail: info@qubino.com
Tel: +386 5 335 95 00
Web: www.qubino.com

Date: 24.04.2014
Document: Qubino_Flush dimmer user manual_V3.0_eng